Assignment #1

(Due by February 16, 2018)

1. Inverse market demand is: $P_D = A - BQ_D$, while inverse market supply is given as $P_S = C + DQ_S$. Derive the equilibrium price and equilibrium quantity. (1 points)

2. If a single monopoly is operating in this market with a cost function of $C(Q) = F + c * Q$, how much will the monopoly produce to attain maximum profits? (2 points)

3. How large would the monopoly's optimum production be with first degree price discrimination? (1 point)

4. What is the main difference between second degree and third degree price discrimination? (2 points)

5. Your company is the leading firm in a Stackelberg oligopoly market, where $n - 1$ other firms are competing with you. You all operate with identical constant marginal costs, c.

   a. How much will be your company's optimum output level? (2 points)

   b. If the number of companies in this market, $n \to \infty$, to what level will the market price converge to? (2 points)